Appendix C

Stony Creek Project
Herbicide Use Assumptions

Alternative B

Treatment	Triclopyr (acres)	Imazapyr (acres)	Glyphosate (acres)
a. Pre-harvest site preparation	0	383	383
b. Post-harvest treatments	383	383	383
Total acres	**383**	**766**	**766**

Treatment	Herbicide	Acres	Area Treated [1]	Typical Usage Rate [2] (lbs/acre)	Lbs of Acid Equivalent
a	Glyphosate	383	0.06	2.00	46.0
a	Imazapyr	383	0.06	0.15	3.4
a	Triclopyr	0	0.06	0.50[3]	0
b	Glyphosate	383	0.06	2.00	46.0
b	Imazapyr	383	0.06	0.02[4]	0.5
b	Triclopyr	383	0.06	0.05[4]	1.1
Total pounds (lbs) of acid equivalent					**97.0**

[1] For site preparation and midstory treatments, approximately 200 spots or less are treated/acre. Assuming a liberal spot average of 4 feet in diameter (2-foot radius), 6% of the acre would be treated: $[((2 \text{ feet})^2 \times 3.14) \times 200] \div 43560 = 0.06$

[2] The SERA Risk Assessments give typical Forest Service use rates per herbicide as:

- Glyphosate: Typical FS usage rate is 2 lbs. of acid equivalent (a.e.) per acre
- Imazapyr: Typical FS usage rate is 0.15 lbs. a.e/acre.
- Triclopyr: Typical FS usage rate is 1 lb. a.e./acre.

[3] In (a), when Triclopyr is used in combination, it is used at half mixture which effectively cuts the use rate in half.

[4] In (b), the amount of herbicide used in post-harvest stand is $1/10^{th}$ of that used in pre-harvest stands.

Total acid equivalent use is 97 lbs over 383* acres (a + c) = 0.25 lbs/acre

* Treatment area b is the same area as a

Alternative C

Treatment	Triclopyr (acres)	Imazapyr (acres)	Glyphosate (acres)
a. Pre-harvest site preparation[1]	0	541	541
b. Post-harvest treatments[2]	541	541	541
c. Midstory treatments	0	116	116
Total acres	**541**	**1198**	**1198**

[1] Includes both early successional forest habitat creation and thinning treatments.

[2] Includes both early successional forest habitat creation and thinning treatments. Note: Assumes the maximum number of acres to be treated; however, the actual number of acres treated would be fewer since not all stands would receive post-harvest site preparation (see Alternative C, # 4: Thinning, Post-harvest Site Preparation on pages 25-26 of the Stony Creek EA). This also applies to the amount of herbicides used, as calculated below.

Treatment	Herbicide	Acres	Area Treated [1]	Typical Usage Rate [2] (lbs/acre)	Lbs of Acid Equivalent
a, c	Glyphosate	657	0.06	2.00	78.8
a, c	Imazapyr	657	0.06	0.15	5.9
a, c	Triclopyr	0	0.06	0.50[3]	0
b	Glyphosate	541	0.06	2.00	64.9
b	Imazapyr	541	0.06	0.02[4]	0.6
b	Triclopyr	541	0.06	0.05[4]	1.6
Total pounds (lbs) of acid equivalent					**151.8**

[1] For site preparation and midstory treatments, approximately 200 spots or less are treated/acre. Assuming a liberal spot average of 4 feet in diameter (2-foot radius), 6% of the acre would be treated: $[((2 \text{ feet})^2 \times 3.14) \times 200] \div 43560 = 0.06$

[2] The SERA Risk Assessments give typical Forest Service use rates per herbicide as:

- Glyphosate: Typical FS usage rate is 2 lbs. of acid equivalent (a.e.) per acre
- Imazapyr: Typical FS usage rate is 0.15 lbs. a.e/acre.
- Triclopyr: Typical FS usage rate is 1 lb. a.e./acre.

[3] In (a), when Triclopyr is used in combination, it is used at half mixture which effectively cuts the use rate in half.

[4] In (b), the amount of herbicide used in a post-harvest stand is $1/10^{th}$ of that used in pre-harvest stands.

Total acid equivalent use is 152 lbs over 657* acres (a + c) = 0.23 lbs/acre

* Treatment area b is the same area as a

Application Methods

Foliar spray: Herbicide is selectively applied to the leaf surfaces of the targeted plant.

Hack-and-squirt: Incisions are made around the stem and herbicide is applied into this cut.

Streamline: Herbicide is applied in a stream to the stem of the targeted plant.

Cut surface: The targeted plant is cut off and herbicide is applied to the stump.